

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number  
**WO 2005/003381 A1**

(51) International Patent Classification<sup>7</sup>: C12Q 1/68

(74) Agent: BLAKE DAWSON WALDRON PATENT SERVICES; Level 37, Grosvenor Place, 225 George Street, Sydney, NSW 2000 (AU).

(21) International Application Number:  
PCT/AU2004/000900

(22) International Filing Date: 5 July 2004 (05.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003903430 4 July 2003 (04.07.2003) AU  
60/491,995 4 August 2003 (04.08.2003) US

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): JOHNSON & JOHNSON RESEARCH PTY. LIMITED [AU/AU]; 1 Central Avenue, Australian Technology Park, Eveleigh, NSW 1430 (AU).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): TODD, Alison Velyian [AU/AU]; 10 Coneill Place, Glebe, NSW 2037 (AU). FUERY, Caroline Jane [AU/AU]; 5 Hurley Street, Toongabbie, NSW 2146 (AU). APPELEGATE, Tanya Lynn [AU/AU]; 10/1 Landenberg Place, Greenwich, NSW 2065 (AU).

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHOD FOR DETECTION OF ALKYLATED CYTOSINE IN DNA

(57) Abstract: There is described a method for detecting alkylated cytosine in double stranded DNA employing one or more enzymes that differentially modify alkylated cytosine and cytosine. At least one region of the DNA is converted to single stranded DNA and the enzyme is reacted with a target region in the single stranded DNA. The presence or level of alkylated cytosine in the target region is detected by determining the level of enzymatic modification of the target region by the enzyme.

WO 2005/003381 A1